

West Virginia University Libraries



3 0802 100952143 2



Beef and Pork Consumption in West Virginia

Bulletin 637

March 1975

West Virginia University Agricultural Experiment Station



SUMMARY AND CONCLUSIONS

In general, the quantities of beef consumed per capita and the prices paid per pound were higher in the middle and urban counties than in the rural counties. However, per capita pork consumption and prices paid per pound were higher in rural areas than in the middle or urban counties surveyed.

The age of the principal income earners also appeared to have an effect on consumption. Per capita beef consumption was the highest in families where the principal income earner was in the 45-54 age category. Per capita pork consumption was highest in the 55-64 and the over 64 categories. Families in these two categories also paid higher prices per pound for pork than younger households.

As household size increased, per capita consumption of beef appeared to decrease. In the case of pork, however, the decrease in consumption per capita associated with increasing family size was very small. Also, single people consumed more beef per capita and paid more per pound than families. In the case of pork consumption by single people, no significant relationship was detected.

In general, per capita consumption and price per pound of beef increased as family incomes increased. Per capita pork consumption, however, appeared to increase as income increased to about \$15,000 and decrease at higher income levels.

Statistically, as the price of beef increased by 10 per cent, the quantity of beef consumed per capita decreased about three per cent. A 10 per cent increase in the price of pork was associated with only a 0.7 per cent decrease in per capita pork consumption.

THE AUTHORS

John P. Kuehn is Associate Agricultural Economist; at the time of this study, James W. Bias was a Graduate Research Assistant.

West Virginia University
Agricultural Experiment Station
College of Agriculture and Forestry
Homer C. Evans, Acting Director
Morgantown

Pork and Beef Consumption In West Virginia

John P. Kuehn and James W. Bias

The onset of the decade of the 1970s has proven to be a tumultuous one in terms of American agriculture. International shortages of grain and other agricultural products, due to increasing populations and inclement weather along with an almost worldwide inflation and energy shortage, have caused significant changes in both the levels and distribution of agricultural prices in the United States.

Between 1960 and March 1973 the prices of all consumer goods increased 46 per cent as measured by the Consumer Price Index (1967=100).¹ The prices of meat, poultry, and fish increased 71 per cent during that same period. However, 39 per cent of that increase took place during 1972 and the first three months of 1973, while the prices of all items increased only 11 per cent.²

In spite of these price increases, beef consumption per capita increased from 85.1 pounds in 1960 to 114.8 pounds in 1972. Pork consumption remained relatively stable during that period (64.9 to 67.7 pounds per capita). Fish consumption also remained relatively stable, increasing only from 10.3 pounds per capita in 1960 to 11.4 pounds per person in 1972. Chicken consumption, however, increased from 28.1 to 42.9 pounds. This increase of 53 per cent was greater than the 35 per cent increase in beef consumption per capita,³ although the absolute increase in chicken consumption was only about 15 pounds compared with nearly 30 pounds for beef.

Obviously our agricultural sector is undergoing significant changes which could have far reaching effects on the lifestyles of everyone, and we must attempt to understand these changes.

OBJECTIVES

The overall objective of this study is to examine the nature of West Virginia's meat consumption characteristics and the socioeconomic factors

¹*Statistical Abstract of the United States, 1973*, U. S. Dept. of Commerce, Social and Economic Statistics Administration, Bureau of the Census, Washington: U. S. Govt. Printing Office, July 1973, p. 354.

²*Ibid.*

³*Ibid.*, p. 87.

which affect them. The information gained from this study should provide a picture of the State's consumption behavior to the meat industry and to the consumer. Because, the industry and our economic and social character are undergoing change, an objective of this research program is to repeat this survey during the summer of 1975 to determine the nature and magnitude of any changes in meat consumption habits taking place since the summer of 1973. The specific objectives are:

1. To estimate the weekly per capita consumption of beef and pork and the average price paid per pound for each by households in West Virginia.
2. To compare these estimates to associated socioeconomic characteristics of households in the State as a whole and in a stratification of the counties of the State based on three different ranges of population density.
3. To determine the nature and magnitude of the statistical relationships between the weekly per capita consumption of beef and pork and the factors thought to influence consumption patterns.
4. To repeat the analysis in the summer of 1975 using the same sampling techniques and to compare the results of objectives one, two, and three for both time periods.

This report is a presentation of the results and analysis of objectives one, two, and three for the survey conducted in the summer of 1973. Objective four is being conducted at the time of this writing and a subsequent bulletin will follow.

The entire study is concerned with an analysis of the consumption of beef, pork, chicken, seafood, and luncheon meat. This bulletin is concerned only with beef and pork. Bulletin 638 will discuss the results for chicken, seafood, and luncheon meat consumption in West Virginia

PROCEDURE

The State's 55 counties were divided into three classes on the basis of the 1970 population per square mile. Counties having a population of 20 or fewer people per square mile were classified as "rural" (Figure 1). Approximately 6.5 per cent, or nine counties, of the State's population were considered "rural." The counties having more than 20 people per square mile but fewer than 100 were classified as "middle" (Figure 2). The 31 "middle" counties contain 53 per cent of the State's population. The counties having a population of 100 or more people per square mile were classified as "urban" (Figure 3). About 40.5 per cent of the State's population is located in the 15 "urban" counties.

From each county classification group, a random sample of counties was selected to be representative of the respective category. A total of 18 counties was randomly selected and divided as follows: three "rural," ten "middle," and five "urban." The number of randomly selected counties in each category was proportional to the share of the State's population in that category.

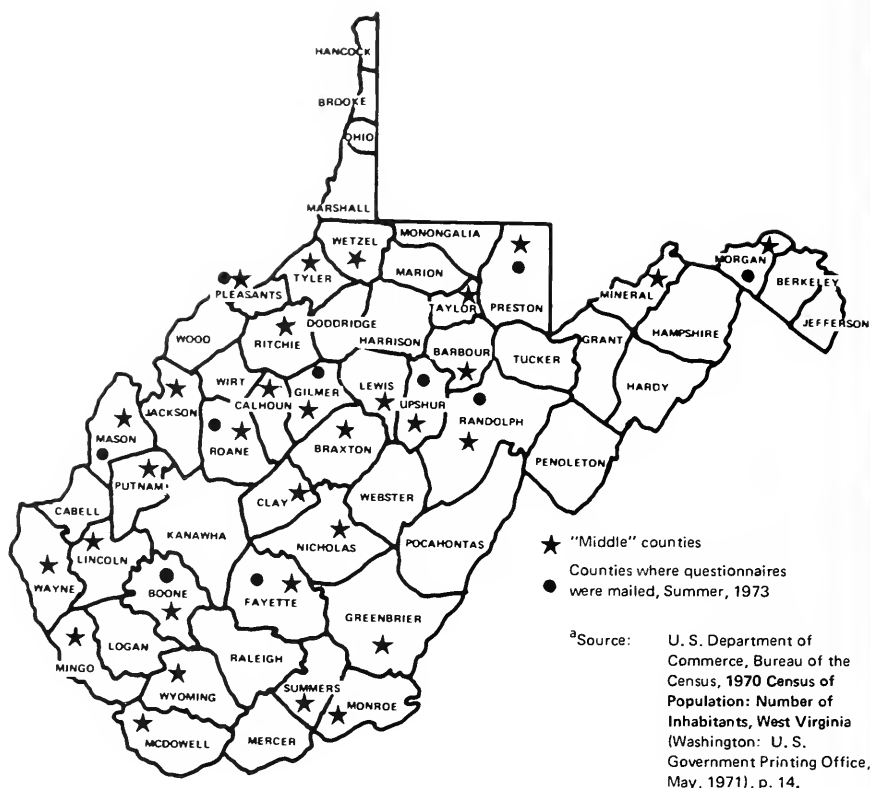


Figure 2. "Middle" Counties: West Virginia Counties with More Than 20 But Fewer Than 100 People Per Square Mile, 1970^a

about 130 questionnaires were sent to "rural" counties, about 1,060 to "middle" counties, and about 810 to "urban" counties.

The first mailing was made on July 30, 1973. Follow-up letters were sent to those counties from which the response was inadequate. Of the more than 2,000 questionnaires mailed, 502, or about 25 per cent, were returned. However, only 450 usable questionnaires were obtained—60 from "rural" counties, 207 from "middle" counties, and 183 from "urban" counties. Some respondents failed or refused to answer all questions on the mail questionnaires. As a consequence, some tables do not include data from all questionnaires.

The mail questionnaires were addressed to the family member most responsible for meat purchasing. Each was asked to report on the consumption of various meats by his or her household during a seven-day period, either preceding or following the day the questionnaire was received.

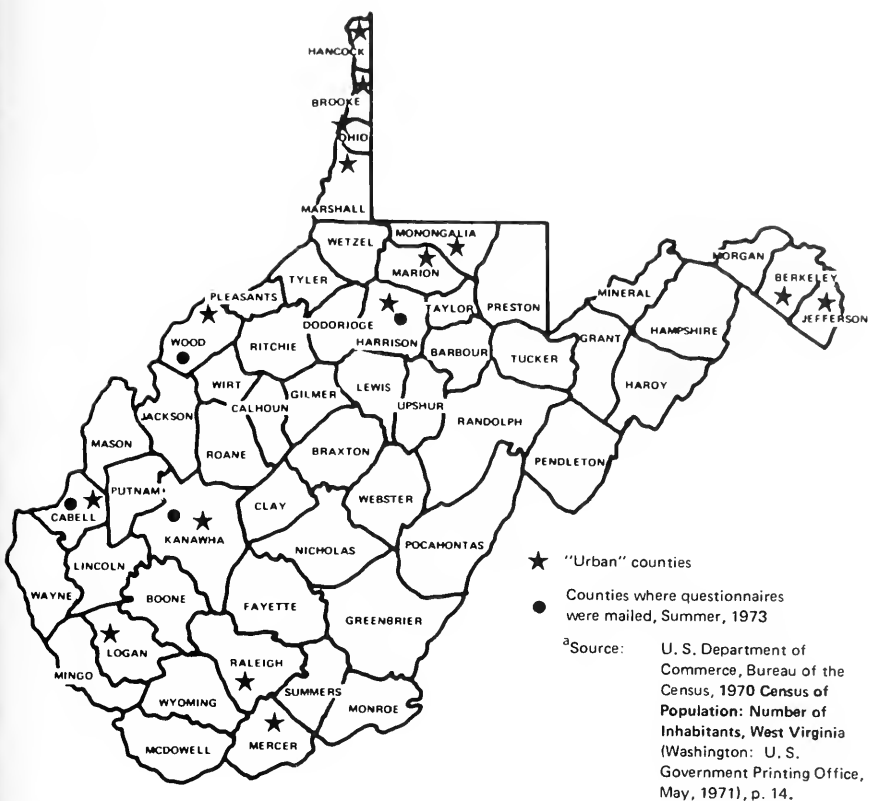


Figure 3. "Urban" Counties: West Virginia Counties with 100 or More People Per Square Mile, 1970^a

SURVEY RESULTS

Family Member Most Responsible for Meat Purchasing

About 72 per cent of the respondents reported that the wife was most responsible for meat purchasing (Appendix Table 1). The husband was primarily responsible in 15 per cent of the households surveyed and in four per cent of the households the husband and wife shared this responsibility equally. Nine per cent of the respondents were single.

Beef. In all cases where the wife was most responsible for meat purchasing, she purchased less beef and usually paid more per pound (Table 1). Single people in the State purchased a much higher quantity of beef per capita and paid a higher price per pound, but they are perhaps at a disadvantage in the

supermarket or grocery because many pre-packaged cuts of beef are designed for family-sized portions. (This study was not designed to detect differences in cuts or quality of meat purchased.)

Urban people purchased more beef per capita and paid a significantly higher average price per pound than rural people. However, the presence or absence of price differentials between rural and urban areas in West Virginia were not analyzed in this study.

Pork. In the State, the quantities of pork purchased and the prices paid per pound were similar for households where either the husband or the wife was most responsible for meat purchasing (Table 2). Single people, however, purchased less pork per capita and paid more per pound than either the husbands or wives.

Urban people purchased less pork per capita and paid less per pound than residents of rural and middle counties. The relationship was just opposite to that of beef.

Principal Income Earner

In 84 per cent of the households surveyed, the husband was the principal income earner (Appendix Table 1). The wife was the main income earner in seven per cent of the households; nine per cent of the respondents were single.

Beef. Families where the wife was the principal income earner purchased less beef and paid less per pound than households where the husband earned the majority of the income (Table 3). Single people, as previously indicated, purchased more beef per capita and paid more per pound.

Pork. In the State, families where the husband was the principal income earner purchased more pork per capita but paid only slightly more than families where the wife was the principal income earner (\$0.89 versus \$0.88) (Table 4). Single people purchased less pork per capita and paid more per pound.

Age of the Principal Income Earner

The majority of the principal income earners surveyed were in the 45 to 64 age group (Appendix Table 1). The proportion of households whose major income earner was in this category increased from 33 per cent in the rural counties to 45 per cent in the middle counties and to 49 per cent in the urban counties. However, the proportion of principal income earners who were in the over 65 year category was highest in the rural counties.

Beef. For the State, households whose principal income earner was in the 45-54 age group purchased more beef per capita and paid the second highest price per pound of all age groups (Table 5). Although the under 25 age group did not purchase the highest quantity of beef per capita, that group did pay the highest price per pound.

Pork. In the State, the 55-64 and the over 65 age groups were the highest in terms of the amount of pork purchased per capita (Table 6). Each purchased 0.68 pound of pork per capita per week. These groups also paid the highest prices per pound. The lowest per capita consumption of pork in the State as a whole was in the under 25 age group. However, the 35-44 category paid the lowest price per pound.

Education of the Principal Income Earner

Of the 450 respondents in the study, six per cent did not graduate from grade school (Appendix Table 1). Sixteen per cent were grade school graduates and 31 per cent were high school graduates. Eight per cent were college graduates, and 14 per cent fell into the category of more than 16 years of education, or postgraduate study.

There was a larger proportion of principal income earners in the 0-7 years of education category (less than a grade school graduate) in the rural counties than in the middle or urban groups. Eighteen per cent of the rural sample did not graduate from grade school. Only four and five per cent of principal income earners fell into this category in the middle and urban counties, respectively.

The proportion of principal income earners who graduated from college and those who studied additionally was higher in the more populated areas. These two categories accounted for five per cent of those sampled in the rural counties, 18 per cent in the middle counties, and 33 per cent in the urban areas.

Beef. Respondents in the 0-7 years of education category purchased 40 per cent less beef per capita than the college graduates, who purchased the greatest amount of beef per capita and paid the second highest price per pound of all education categories (Table 7). The highest price per pound of beef was paid by principal income earners in the 13 to 15 years of education group (post high school but not yet a college graduate). However, the quantity of beef purchased per capita by respondents in this category was almost as high as that of the college graduate category.

Respondents in all educational categories paid higher prices per pound and purchased more beef per capita in the more populated areas of the State than in the rural areas. However, the questionnaire used for this study did not specifically determine the quantities of meat consumed from home slaughter and/or home freezers. The study was concerned with purchases during one specific week and did not include meat purchased previously and consumed during that week. The study also excluded consumption of meat in a restaurant or elsewhere outside the home.

Pork. The greatest amount of pork purchased per capita was in the 0-7 years of education category (Table 8). Principal income earners in this group also paid the highest price per pound of all other categories. The lowest amount of pork

purchased and the lowest price per pound was encountered in the highest education category (more than 16 years). Pork consumption appeared to decrease with increasing education.

Occupation of the Principal Income Earner

Professionals accounted for a large proportion of principal income earners surveyed, with 18 per cent (Appendix Table 1). Seventeen per cent were retired; 16 per cent were laborers; and 11 per cent were white collar workers. The smallest proportion of respondents (1.11 per cent) was in the unemployed category.

There were substantially more professional people in urban areas (28 per cent) than in rural areas (5 per cent), and there were also more white collar workers (17 per cent) in urban areas than in rural areas (3 per cent). There were twice as many laborers in rural areas (20 per cent) than in urban areas (10 per cent). The proportion of unemployed respondents was the lowest in the middle counties (0.97 per cent). This was followed by the urban areas (1.09 per cent) and the rural counties with 1.67 per cent.

Beef. In the State, self employed people, followed by professionals, reported purchasing the greatest amount of beef per capita (Table 9). Craftsmen, however, paid higher prices per pound than either self employed people or professionals and they purchased less per capita.

Unemployed people purchased the least amount of beef per capita of any other group (one pound per capita per week). However, they paid slightly more per pound than the average household (\$1.96 per pound compared to the State average of \$1.95 per pound).⁵ Laborers purchased only slightly more beef per capita than unemployed respondents but they paid the second lowest price per pound of all groups. Farmers paid the least per pound of any of the other occupational categories.

The results showed that rural people generally purchased less beef per capita and paid less per pound than urban people. However, in the cases of the professional people and white collar workers surveyed, more beef was purchased per capita at a higher price per pound in rural areas than in urban areas.

Pork. In the State as a whole, the occupational group which purchased the greatest amount of pork per capita and paid the highest price per pound was the service worker (Table 10). Professionals, on the other hand, purchased the smallest quantity of pork per capita and paid the second lowest price per pound. The second highest amount of pork purchased and the third highest price paid per pound was by unemployed respondents. The five unemployed respondents

⁵Only one per cent of the sample (five respondents) were unemployed and any conclusions based on such a small proportion could be highly questionable.

reported purchasing an average of 0.83 pound of pork per week at an average price of \$1.08. The average quantity of pork purchased by all households in the survey was 0.61 pound per capita per week and the average price per pound was \$0.89. The State average of quantities purchased and prices paid per pound decreased in the middle counties and further in the urban counties.

Household Size

The most commonly occurring household size encountered in this survey was two people (Appendix Table 1). Thirty-two per cent of those surveyed were families of two people; 22 per cent were families of four; 20 per cent were families of three; and 10 per cent were five-person households. One nine-member family and one ten-member family were included in the survey.

Beef. In general, the larger the family size the smaller amount of beef purchased per person (Table 11). The price per pound of beef purchased also decreased as family size increased.

Pork. Family size did not appear to significantly influence the quantity of pork purchased per capita or the price per pound (Table 12). There was an indication, however, that as household size increased a slight decrease in per capita consumption occurred.

Total Annual Household Income

The most commonly occurring household income in the State sample was \$5,000 to \$9,999 (Appendix Table 1), with 31 per cent of the households. Twenty-five per cent of those sampled earned \$10,000 to \$14,999, 18 per cent earned \$1,000 to \$4,999, and 17 per cent fell in the \$15,000 to \$24,999 range. Only three per cent earned less than \$1,000, and only six per cent of the households surveyed earned more than \$25,000. Incomes tended to be higher in the middle and urban counties than in the rural areas. Urban areas had fewer low income households and more higher income households than rural areas.

Beef. In general, beef consumption per capita increased as incomes increased (Table 13). Prices paid per pound also tended to increase with higher incomes and consumption levels.

Pork. Pork purchased per capita appeared to increase as income increased to about \$15,000 but decreased as incomes reached \$25,000 and over (Table 14). Prices paid per pound also appeared to follow this same general pattern.

Statistical Analysis

Multiple regression analysis was used to statistically determine the effects of the various socioeconomic variables on weekly per capita beef and pork consumption. The more statistically significant of these variables are shown in Tables 15 and 16.

Although there are many other factors involved in determining consumption trends, a few general conclusions can be derived from the more significant results of the equations.

Beef. 1. Grade school graduates (eight years of education) consumed less beef per capita than other educational categories.

2. Of the occupational categories, the laborer, self employed, and retired each consumed more than the average amount of beef consumed by households in the remaining occupational categories of similar income, family size, population area.

3. As household size increased, per capita beef consumption decreased.

4. As household income increased by 10 per cent, per capita beef consumption increased by about one per cent.

5. As the price of beef increased by 10 per cent, the quantity of beef consumed per capita decreased by about three per cent.

Pork. 1. People of similar socioeconomic categories in the middle counties consumed more pork (0.19 pound more) than people in the rural or urban counties.

2. Older principal income earners in similar socioeconomic categories consumed more pork per capita than the younger households.

3. Larger households tended to consume less pork per person than smaller households in the same socioeconomic groups.

4. A 10 per cent increase in the price of pork was associated with a 0.7 per cent decrease in per capita pork consumption.

TABLES 1-16

TABLE 1
BEEF: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Family Member Most Responsible for Meat Purchasing, Summer, 1973

Family Member Most Responsible for Meat Purchasing	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Wife	322	1.29	\$1.89	45	1.11	\$1.57	151	1.23	\$1.76	126	1.43	\$2.16
Husband	69	1.37	1.80	10	0.94	1.21	31	1.28	1.39	28	1.63	2.47
Single	39	1.65	2.78	4	1.63	2.00	18	1.56	2.83	17	1.75	2.91
Both Wife and Husband	20	1.42	1.83	1	0.75	1.25	7	1.62	1.98	12	1.36	1.80
All Households	450	1.34	\$1.95	60	1.11	\$1.53	207	1.28	\$1.80	183	1.49	\$2.25

TABLE 2
PORK: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Family Member Most Responsible for Meat Purchasing, Summer, 1973

Family Member Most Responsible for Meat Purchasing	STATE		RURAL		MIDDLE		URBAN	
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.
Wife	322	0.63	\$0.91	45	0.84	\$1.17	151	0.66
Husband	69	0.62	0.87	10	0.27	0.46	31	0.68
Single	39	0.60	0.94	4	0.63	0.50	18	0.60
Both Wife and Husband	20	0.34	0.57	1	0.00	0.00	7	0.45
All Households	450	0.61	\$0.89	60	0.72	\$0.99	207	0.65
							183	0.53
								\$0.84

TABLE 3
BEEF: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Principal Income Earner, Summer, 1973

Principal Income Earner	STATE		RURAL		MIDDLE		URBAN	
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.
Wife	33	1.04	\$1.51	5	0.72	\$1.20	13	1.02
Husband	378	1.34	1.90	51	1.11	1.53	176	1.27
Single	39	1.65	2.78	4	1.63	2.00	18	1.56
All Households	450	1.34	\$1.95	60	1.11	\$1.53	207	1.28
						\$1.80	183	1.49
								\$2.25

TABLE 4
PORK: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Principal Income Earner, Summer, 1973

Principal Income Earner	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Wife	33	0.56	\$0.88	5	0.30	\$0.81	13	0.70	\$1.11	15	0.52	\$0.71
Husband	378	0.62	0.89	51	0.76	1.04	176	0.65	0.89	151	0.53	0.83
Single	39	0.60	0.94	4	0.63	0.50	18	0.60	0.96	17	0.59	1.02
All Households	450	0.61	\$0.89	60	0.72	\$0.99	207	0.65	\$0.91	183	0.53	\$0.84

TABLE 5
BEEF: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Age of the Principal Income Earner, Summer, 1973

Age of the Principal Income Earner	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Under 25	19	1.35	\$2.46	3	1.94	\$2.50	8	1.33	\$2.13	8	1.14	\$2.79
25-34	89	1.28	1.89	12	1.00	1.81	41	1.32	1.89	36	1.31	1.89
35-44	72	1.14	1.58	10	0.80	1.10	36	1.16	1.54	26	1.25	1.82
45-54	101	1.48	2.20	10	1.23	1.36	47	1.44	2.13	44	1.59	2.46
55-64	101	1.33	1.91	10	0.27	0.60	46	1.28	1.68	45	1.61	2.45
65 and over	68	1.45	1.98	15	1.73	2.15	29	1.09	1.61	24	1.69	2.32
All Households	450	1.34	\$1.95	60	1.11	\$1.53	207	1.28	\$1.80	183	1.49	\$2.25

TABLE 6

PORK: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Age of the Principal Income Earner, Summer, 1973

Age of the Principal Income Earner	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Under 25	19	0.48	\$0.79	3	0.50	\$1.06	8	0.72	\$0.94	8	0.22	\$0.55
25-34	89	0.61	0.88	12	0.60	0.79	41	0.62	0.90	36	0.59	0.89
35-44	72	0.49	0.73	10	0.48	0.67	36	0.55	0.78	26	0.42	0.68
45-54	101	0.61	0.88	10	0.61	0.86	47	0.65	0.95	44	0.56	0.82
55-64	101	0.68	0.99	10	0.60	1.05	46	0.79	0.96	45	0.59	1.00
65 and over	68	0.68	0.97	15	1.15	1.39	29	0.58	0.92	24	0.51	0.78
All Households	450	0.61	\$0.89	60	0.72	\$0.99	207	0.65	\$0.91	183	0.53	\$0.84

TABLE 7

BEEF: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Education of the Principal Income Earner, Summer, 1973

Education of the Principal Income Earner	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
0 to 7 Years	28	0.91	\$1.29	11	0.56	\$0.99	8	1.16	\$1.48	9	1.13	\$1.49
8 Years (grade school graduate)	71	1.06	1.41	16	1.37	1.53	41	0.67	0.90	14	1.82	2.77
9 to 11 Years	51	1.22	1.84	5	0.98	1.51	27	1.19	1.75	19	1.32	2.05
12 Years (high school graduate)	138	1.47	2.08	19	1.07	1.41	70	1.48	1.99	49	1.60	2.48
13 to 15 Years	62	1.50	2.26	6	1.50	2.35	24	1.47	2.26	32	1.53	2.24
16 Years (college graduate)	36	1.52	2.21	2	1.79	3.21	13	1.43	2.28	21	1.54	2.08
More Than 16 Years	64	1.42	2.19	1	0.88	2.13	24	1.59	2.27	39	1.32	2.15
All Households	450	1.34	\$1.95	60	1.11	\$1.53	207	1.28	\$1.80	183	1.49	\$2.25

TABLE 8

PORK: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Education of the Principal Income Earner, Summer, 1973

Education of the Principal Income Earner	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
0 to 7 Years	28	0.79	\$1.18	11	0.77	\$1.34	8	0.73	\$0.97	9	0.85	\$1.17
8 Years (grade school graduate)	71	0.68	0.96	16	0.98	1.27	41	0.65	0.88	14	0.43	0.83
9 to 11 Years	51	0.55	0.83	5	0.27	0.33	27	0.60	0.80	19	0.56	1.00
12 Years (high school graduate)	138	0.63	0.87	19	0.72	0.90	70	0.68	0.88	49	0.53	0.82
13 to 15 Years	62	0.57	0.88	6	0.38	0.53	24	0.63	0.95	32	0.57	0.90
16 Years (college graduate)	36	0.56	0.84	2	0.38	0.54	13	0.29	0.59	21	0.74	1.01
More Than 16 Years	64	0.51	0.83	1	0.63	1.13	24	0.80	1.24	39	0.33	0.57
All Households	450	0.61	\$0.89	60	0.72	\$0.99	207	0.65	\$0.91	183	0.53	\$0.84

TABLE 9
BEEF: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Occupation of the Principal Income Earner, Summer, 1973

Occupation of the Principal Income Earner	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Farmer	15	1.16	\$0.97	9	1.04	\$1.25	6	1.34	\$0.55	Unidentified		
Professional	83	1.49	2.18	3	2.06	3.17	28	1.46	2.10	52	1.48	\$2.16
Housewife	10	1.22	1.48	4	0.98	1.25	4	0.81	0.94	2	2.50	3.00
Laborer	72	1.02	1.45	12	0.65	0.76	41	1.08	1.61	19	1.15	1.52
Self-Employed	40	1.73	2.50	5	0.83	1.13	16	1.48	2.05	19	2.19	3.25
Retired	75	1.37	1.90	11	1.53	2.24	39	1.13	1.54	25	1.67	2.32
Unemployed	5	1.00	1.96	1	0.00	0.00	2	1.33	3.33	2	1.19	1.56
White Collar	50	1.39	2.07	2	1.50	2.67	17	1.57	2.01	31	1.29	2.07
Service Worker	18	1.30	1.66	1	0.30	0.50	10	1.29	1.55	7	1.46	1.99
Craftsman	24	1.35	2.88	4	1.08	0.76	8	1.23	1.82	12	1.52	3.10
Machine Operator	37	1.36	2.19	7	1.46	2.52	26	1.32	2.08	4	1.46	2.32
Sales and Clerical	21	1.14	1.98	1	0.75	0.25	10	1.44	2.35	10	0.88	1.77
All Households	450	1.34	\$1.95	60	1.11	\$1.53	207	1.28	\$1.80	183	1.49	\$2.25

TABLE 10
PORK: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Households Relative to the Occupation of the Principal Income Earner, Summer, 1973

Occupation of the Principal Income Earner	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Farmer	15	0.76	\$0.85	9	1.02	\$1.16	6	0.39	\$0.38	Unidentified		
Professional	83	0.50	0.80	3	0.33	0.50	28	0.60	1.01	52	0.46	\$0.71
Housewife	10	0.80	1.16	4	0.63	0.90	4	0.88	1.25	2	1.00	1.50
Laborer	72	0.60	0.89	12	0.64	1.00	41	0.66	0.96	19	0.42	0.66
Self-Employed	40	0.67	0.93	5	0.58	0.83	16	0.48	0.60	19	0.85	1.24
Retired	75	0.60	0.88	11	0.78	1.19	39	0.62	0.86	25	0.50	0.77
Unemployed	5	0.83	1.08	1	1.63	1.63	2	0.83	1.33	2	0.44	0.56
White Collar	50	0.54	0.79	2	0.50	0.83	17	0.66	0.74	31	0.48	0.82
Service Worker	18	0.90	1.31	1	1.50	1.90	10	0.86	1.04	7	0.88	1.62
Craftsman	24	0.59	0.83	4	0.47	0.65	8	0.93	1.13	12	0.40	0.69
Machine Operator	37	0.63	0.90	7	0.69	0.86	26	0.60	0.88	4	0.75	1.07
Sales and Clerical	21	0.65	1.00	1	0.25	0.75	10	0.83	1.19	10	0.51	0.83
All Households	450	0.61	\$0.89	60	0.72	\$0.99	207	0.65	\$0.91	183	0.53	\$0.84

TABLE 11
BEEF: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Household Size, Summer, 1973

Household Size	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
1	40	1.65	\$2.75	5	1.40	\$1.90	17	1.65	\$3.00	18	1.72	\$2.75
2	146	1.56	2.37	15	1.67	2.27	66	1.38	1.97	65	1.72	2.80
3	92	1.28	1.74	13	1.35	1.82	46	1.22	1.67	33	1.33	1.82
4	97	1.19	1.62	14	0.62	0.96	40	1.27	1.58	43	1.31	1.87
5	46	1.08	1.50	8	0.81	1.00	22	1.09	1.52	16	1.21	1.74
6	14	1.08	1.35	2	0.21	0.21	7	1.14	1.42	5	1.33	1.70
7	10	0.90	1.34	1	0.79	2.14	7	0.85	1.12	2	1.14	1.71
8	3	0.52	0.48	1	0.69	0.56	1	0.44	0.69	1	0.44	0.19
9	1	0.28	0.28	1	0.28	0.28	Unidentified			Unidentified		
10	1	0.75	0.95	Unidentified			1	0.75	0.95	Unidentified		
All Households	450	1.34	\$1.95	60	1.11	\$1.53	207	1.28	\$1.80	183	1.49	\$2.25

TABLE 12

PORK: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by Household Size, Summer, 1973

Household Size	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
1	40	0.61	\$0.95	5	0.60	\$0.70	17	0.62	\$0.97	18	0.61	\$1.00
2	146	0.71	1.03	15	0.93	1.33	66	0.75	0.98	65	0.62	1.01
3	92	0.64	0.97	13	0.79	1.15	46	0.66	1.03	33	0.55	0.81
4	97	0.51	0.74	14	0.63	0.74	40	0.52	0.75	43	0.46	0.74
5	46	0.47	0.63	8	0.45	0.60	22	0.61	0.77	16	0.28	0.44
6	14	0.57	0.78	2	0.54	0.71	7	0.57	0.77	5	0.58	0.82
7	10	0.58	0.74	1	0.64	1.71	7	0.69	0.73	2	0.14	0.29
8	3	0.48	0.65	1	0.56	0.81	1	0.56	0.94	1	0.31	0.19
9	1	0.94	1.67	1	0.94	1.67	Unidentified			Unidentified		
10	1	0.55	0.75	Unidentified			1	0.55	0.75	Unidentified		
All Households	450	0.61	\$0.89	60	0.72	\$0.79	207	0.65	\$0.91	183	0.53	\$0.84

TABLE 13
BEEF: The Weekly Per Capita Consumption and the Average Price Paid Per Pound
by the Total Annual Household Income, Summer, 1973

Total Annual Household Income	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Under \$1,000	13	1.06	\$1.20	1	0.38	\$0.63	9	1.08	\$1.24	3	1.25	\$1.25
\$1,000-\$4,999	80	0.98	1.25	22	0.84	0.97	37	0.82	1.08	21	1.42	1.85
\$5,000-\$9,999	138	1.28	1.79	22	1.29	1.96	65	1.27	1.74	51	1.29	1.78
\$10,000-\$14,999	114	1.50	2.35	9	1.04	1.64	60	1.43	2.11	45	1.70	2.81
\$15,000-\$24,999	76	1.55	2.22	6	1.71	2.01	31	1.57	2.12	39	1.51	2.34
\$25,000 and Over	27	1.59	2.75	Unidentified			4	1.71	3.81	23	1.57	2.56
Unidentified	2	1.08	1.53	Unidentified			1	0.90	1.30	1	1.25	1.75
All Households	450	1.34	\$1.95	60		\$1.53	207	1.28	\$1.80	183	1.49	\$2.25

TABLE 14

PORK: The Weekly Per Capita Consumption and the Average Price Per Pound
by the Total Annual Household Income, Summer, 1973

Total Annual Household Income	STATE			RURAL			MIDDLE			URBAN		
	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price	Responses	Lbs.	Price
Under \$1,000	13	0.40	\$0.64	1	0.13	\$0.13	9	0.42	\$0.66	3	0.42	\$0.75
\$1,000-\$4,999	80	0.63	0.89	22	0.70	1.00	37	0.59	0.76	21	0.62	1.00
\$5,000-\$9,999	138	0.61	0.84	22	0.79	1.05	65	0.63	0.89	51	0.50	0.69
\$10,000-\$14,999	114	0.67	0.97	9	0.70	0.94	60	0.77	1.04	45	0.53	0.89
\$15,000-\$24,999	76	0.62	0.97	6	0.63	0.90	31	0.62	0.98	39	0.61	0.98
\$25,000 and Over	27	0.41	0.68	Unidentified			4	0.56	0.81	23	0.38	0.66
Unidentified	2	0.38	0.88	Unidentified			1	0.00	0.00	1	0.75	1.75
All Households	450	0.61	\$0.89	60	0.72	\$0.99	207	0.65	\$0.91	183	0.53	\$0.84

TABLE 15
Results of Weekly Per Capita Beef Consumption (Y_1) Multiple Regression,
Summer, 1973

Variable	Regression Coefficient	t Values	Standard Error of Regression Coefficient	Standard B Values
X_5 Education of the Principal Income Earner 8 Years (grade school graduate)	-0.6487	-2.0526***	0.3160	-0.2232
X_6 Occupation of the Principal				
Income Earner				
Laborer	0.5195	1.7978****	0.2890	0.2138
Self-Employed	0.5206	1.6567****	0.3143	0.1629
Retired	0.7507	2.1956****	0.3419	0.2470
X_7 Household Size	-0.1169	-2.5838**	0.0452	-0.1985
X_8 Total Annual Household Income	0.1135	1.6780****	0.0676	0.1442
X_9 Price of Beef	-0.2567	-2.6776**	0.0959	-0.2092

$R^2 = 0.2823$ $F = 2.1568$ Probability of a greater $F = 0.0013$

** = 0.01 Significance Level

*** = 0.05 Significance Level

**** = 0.10 Significance Level

TABLE 16
Results of Weekly Per Capita Pork Consumption (Y_2) Multiple Regression,
Summer, 1973

Variable	Regression Coefficient	t Values	Standard Error of Regression Coefficient	Standard B Values
X_1 County Classification Group Middle Counties	0.1883	2.2814***	0.0826	0.1854
X_4 Age of the Principal Income Earner	0.0805	2.4075***	0.0334	0.2101
X_7 Household Size	-0.0509	-1.8865****	0.0270	-0.1512
X_{10} Price of Pork	-0.0672	-2.1179***	0.0308	-0.1682

$R^2 = 0.2189$ $F = 1.5368$ Probability of a greater $F = 0.0452$

*** = 0.05 Significance Level

**** = 0.10 Significance Level

LITERATURE CITED

- New York State Division of Housing, *A Method for Employing Sampling Techniques in Housing Surveys*, New York: New York State Division of Housing, September, 1948.
- U. S. Department of Commerce, *1970 Census of Population: Number of Inhabitants, West Virginia*, Bureau of the Census, Washington: U. S. Government Printing Office, May, 1971.
- U. S. Department of Commerce, *Statistical Abstract of the United States, 1973*, Social and Economic Statistics Administration, Bureau of the Census, Washington: U. S. Government Printing Office, July, 1973.

APPENDIX

APPENDIX
TABLE 1
Number of Responses and Per Cent of Households Responding by Socioeconomic
Characteristic, Summer, 1973

Socioeconomic Category	Responses and Per Cent of Households Responding							
	STATE		RURAL		MIDDLE		URBAN	
	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent
Family Member Most Responsible for Meat Purchasing								
Wife	322	71.56	45	75.00	151	72.95	126	68.85
Husband	69	15.33	10	16.67	31	14.98	28	15.30
Single	39	8.67	4	6.67	18	8.70	17	9.29
Both Wife and Husband	20	4.44	1	1.67	7	3.38	12	6.56
TOTAL	450	100.00	60	100.01	207	100.01	183	100.00
Principal Income Earner								
Wife	33	7.33	5	8.33	13	6.28	15	8.20
Husband	378	84.00	51	85.00	176	85.02	151	82.51
Single	39	8.67	4	6.67	18	8.70	17	9.29
TOTAL	450	100.00	60	100.00	207	100.00	183	100.00

^aRounding errors may cause per cent totals to not equal 100.00 per cent.

Age of the Principal Income Earner	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent
Under 25	19	4.22	3	5.00	8	3.87	8	4.37
25-34	89	19.78	12	20.00	41	19.81	36	19.67
35-44	72	16.00	10	16.67	36	17.39	26	14.21
45-54	101	22.44	10	16.67	47	22.71	44	24.04
55-64	101	22.44	10	16.67	46	22.22	45	24.59
65 and Over	68	15.11	15	25.00	29	14.01	24	13.12
TOTAL	450	99.99	60	100.01	207	100.01	183	100.00
Education of the Principal Income Earner								
0 to 7 Years	28	6.22	11	18.33	8	3.87	9	4.92
8 Years (grade school graduate)	71	15.78	16	26.67	41	19.81	14	7.65
9 to 11 Years	51	11.33	5	8.33	27	13.04	19	10.38
12 Years (high school graduate)	138	30.67	19	31.67	70	33.81	49	26.78
13 to 15 Years	62	13.78	6	10.00	24	11.59	32	17.49
16 Years (college graduate)	36	8.00	2	3.33	13	6.28	21	11.48
More Than 16 years	64	14.22	1	1.67	24	11.59	39	21.31
TOTAL	450	100.00	60	100.00	207	99.99	183	100.01

^a Rounding errors may cause per cent totals to not equal 100.00 per cent.

(continued)

Table 1 (continued)

Occupation of the Principal Income Earner	STATE		RURAL		MIDDLE		URBAN	
	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent
Farmer	15	3.33	9	15.00	6	2.89	0	0.00
Professional	83	18.44	3	5.00	28	13.53	52	28.41
Housewife	10	2.22	4	6.67	4	1.93	2	1.09
Laborer	72	16.00	12	20.00	41	19.81	19	10.38
Self-Employed	40	8.89	5	8.33	16	7.73	19	10.38
Retired	75	16.67	11	18.33	39	18.84	25	13.66
Unemployed	5	1.11	1	1.67	2	0.97	2	1.09
White Collar	50	11.11	2	3.33	17	8.21	31	16.94
Service Worker	18	4.00	1	1.67	10	4.83	7	3.83
Craftsman	24	5.33	4	6.67	8	3.87	12	6.56
Machine Operator	37	8.22	7	11.67	26	12.56	4	2.19
Sales and Clerical	21	4.67	1	1.67	10	4.83	10	5.46
TOTAL	450	99.99	60	100.01	207	100.00	183	99.99
Size of Household								
1	40	8.89	5	8.33	17	8.21	18	9.84
2	146	32.44	15	25.00	66	31.88	65	35.52
3	92	20.44	13	21.67	46	22.22	33	18.03
4	97	21.56	14	23.33	40	19.32	43	23.50
5	46	10.22	8	13.33	22	10.63	16	8.74
6	14	3.11	2	3.33	7	3.38	5	2.73

Table 1 (continued)

Size of Household	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent	Responses	Per Cent
(cont.)								
7	10	2.22	1	1.67	7	3.38	2	1.09
8	3	0.67	1	1.67	1	0.48	1	0.55
9	1	0.22	1	1.67	0	0.00	0	0.00
10	1	0.22	0	0.00	1	0.48	0	0.00
TOTAL	450	99.99	60	100.00	207	99.98	183	100.00
Total Annual Household Income								
Under \$1,000	13	2.89	1	1.67	9	4.35	3	1.64
\$1,000 to \$4,999	80	17.78	22	36.67	37	17.89	21	11.48
\$5,000 to \$9,999	138	30.67	22	36.67	65	31.40	51	27.87
\$10,000 to \$14,999	114	25.33	9	15.00	60	28.97	45	24.59
\$15,000 to \$24,999	76	16.89	6	10.00	31	14.98	39	21.31
\$25,000 and Over	27	6.00	0	0.00	4	1.93	23	12.57
Unidentified	2	0.44	0	0.00	1	0.48	1	0.55
TOTAL	450	100.00	60	100.01	207	100.00	183	100.01

^aRounding errors may cause per cent totals to not equal 100.00 per cent.

CONFIDENTIAL
Survey Form
West Virginia University
Department of Agricultural Economics

1. Which family member is most responsible for meat purchasing?
☐ Wife
☐ Husband
☐ Other (write in) _____
2. Which family member is the principal income earner?
☐ Wife
☐ Husband
☐ Other (write in) _____
3. Age of the principal income earner.
☐ Under 25
☐ 25 - 34
☐ 35 - 44
☐ 45 - 54
☐ 55 - 64
☐ 65 and over
4. Grade completed in school of the principal income earner.
☐ 0 to 7 years
☐ 8 years (grade school graduate)
☐ 9 to 11 years
☐ 12 years (high school graduate)
☐ 13 to 15 years
☐ 16 years (college graduate)
☐ more than 16 years
5. Occupation of the principal income earner.
☐ Farmer ☐ Self-employed ☐ Service Worker
☐ Professional ☐ Retired ☐ Craftsman
☐ Housewife ☐ Unemployed ☐ Machine Operator
☐ Laborer ☐ White Collar ☐ Sales and Clerical
6. How many people (total number) are there living in your household?
☐ 1 ☐ 4 ☐ 7
☐ 2 ☐ 5 ☐ 8
☐ 3 ☐ 6 ☐ more than 8 (write in) _____

7. Into which of the following groups would your total annual household income fall (all family members)?

- | | |
|---|---|
| <input type="checkbox"/> Under \$1,000 | <input type="checkbox"/> \$10,000 to \$14,999 |
| <input type="checkbox"/> \$1,000 to \$4,999 | <input type="checkbox"/> \$15,000 to \$24,999 |
| <input type="checkbox"/> \$5,000 to \$9,999 | <input type="checkbox"/> \$25,000 and over |

8. Has your consumption of meat changed over the last year?

- ☐ Increased
☐ Decreased
☐ Same (no change)

9. Which county do you live in? _____

**West Virginia University
Department of Agricultural Economics**

We need a complete report on the meats you and your household purchased at retail stores and ate during the last seven days or will eat during the next seven days from the time you receive this questionnaire. The quantity and current price of meats consumed from home freezers should be included. **Do not include quantities or prices of meats consumed in restaurants.**

If you should encounter any difficulty in deciding into which category various types of meats fall, then look at the list that follows.

MEATS

Beef	Steak, roast, stewing, ground, canned, corned, chipped, dried, and other.
Pork	Bacon, chops, ham, loin, sausage, salt pork, chipped, dried, and other.
Poultry	Chicken, turkey, duck, and other.
Seafood	Fresh, canned, shellfish, and other.
Lunch Meats	Bologna, salami, pickle loaf, goose liver, Spam, and other.

BEEF Eaten Per Week

- [] 0 to 1 pound
- [] 1 to 2 pounds
- [] 2 to 3 pounds
- [] 3 to 4 pounds
- [] 4 to 5 pounds
- [] 5 to 6 pounds
- [] 6 to 7 pounds
- [] 7 to 8 pounds
- [] 8 to 9 pounds
- [] 9 to 10 pounds
- [] 10 to 14 pounds
- [] 15 pounds and over

Total Amount Spent Per Week

- [] 0 to \$.99
- [] \$1.00 to \$1.99
- [] \$2.00 to \$2.99
- [] \$3.00 to \$3.99
- [] \$4.00 to \$4.99
- [] \$5.00 to \$5.99
- [] \$6.00 to \$6.99
- [] \$7.00 to \$7.99
- [] \$8.00 to \$8.99
- [] \$9.00 to \$9.99
- [] \$10.00 to \$14.99
- [] \$15.00 to \$14.99

PORK Eaten Per Week

- [] 0 to 1 pound
- [] 1 to 2 pounds
- [] 2 to 3 pounds
- [] 3 to 4 pounds
- [] 4 to 5 pounds
- [] 5 to 6 pounds
- [] 6 to 7 pounds
- [] 7 to 8 pounds
- [] 8 to 9 pounds
- [] 9 to 10 pounds
- [] 10 to 14 pounds
- [] 15 pounds and over

Total Amount Spent Per Week

- [] 0 to \$.99
- [] \$1.00 to \$1.99
- [] \$2.00 to \$2.99
- [] \$3.00 to \$3.99
- [] \$4.00 to \$4.99
- [] \$5.00 to \$5.99
- [] \$6.00 to \$6.99
- [] \$7.00 to \$7.99
- [] \$8.00 to \$8.99
- [] \$9.00 to \$9.99
- [] \$10.00 to \$14.99
- [] \$15.00 and over

POULTRY Eaten Per Week

- [] 0 to 1 pound
- [] 1 to 2 pounds
- [] 2 to 3 pounds
- [] 3 to 4 pounds
- [] 4 to 5 pounds
- [] 5 to 6 pounds
- [] 6 to 7 pounds
- [] 7 to 8 pounds
- [] 8 to 9 pounds
- [] 9 to 10 pounds
- [] 10 to 14 pounds
- [] 15 pounds and over

Total Amount Spent Per Week

- [] 0 to \$.99
- [] \$1.00 to \$1.99
- [] \$2.00 to \$2.99
- [] \$3.00 to \$3.99
- [] \$4.00 to \$4.99
- [] \$5.00 to \$5.99
- [] \$6.00 to \$6.99
- [] \$7.00 to \$7.99
- [] \$8.00 to \$8.99
- [] \$9.00 to \$9.99
- [] \$10.00 to \$14.99
- [] \$15.00 and over

SEAFOOD Eaten Per Week

- ☐ 0 to 1 pound
- ☐ 1 to 2 pounds
- ☐ 2 to 3 pounds
- ☐ 3 to 4 pounds
- ☐ 4 to 5 pounds
- ☐ 5 to 6 pounds
- ☐ 6 to 7 pounds
- ☐ 7 to 8 pounds
- ☐ 8 to 9 pounds
- ☐ 9 to 10 pounds
- ☐ 10 to 14 pounds
- ☐ 15 pounds and over

Total Amount Spent Per Week

- ☐ 0 to \$.99
- ☐ \$1.00 to \$1.99
- ☐ \$2.00 to \$2.99
- ☐ \$3.00 to \$3.99
- ☐ \$4.00 to \$4.99
- ☐ \$5.00 to \$5.99
- ☐ \$6.00 to \$6.99
- ☐ \$7.00 to \$7.99
- ☐ \$8.00 to \$8.99
- ☐ \$9.00 to \$9.99
- ☐ \$10.00 to \$14.99
- ☐ \$15.00 and over

LUNCH MEAT Eaten Per Week

- ☐ 0 to 1 pound
- ☐ 1 to 2 pounds
- ☐ 2 to 3 pounds
- ☐ 3 to 4 pounds
- ☐ 4 to 5 pounds
- ☐ 5 to 6 pounds
- ☐ 6 to 7 pounds
- ☐ 7 to 8 pounds
- ☐ 8 to 9 pounds
- ☐ 9 to 10 pounds
- ☐ 10 to 14 pounds
- ☐ 15 pounds and over

Total Amount Spent Per Week

- ☐ 0 to \$.99
- ☐ \$1.00 to \$1.99
- ☐ \$2.00 to \$2.99
- ☐ \$3.00 to \$3.99
- ☐ \$4.00 to \$4.99
- ☐ \$5.00 to \$5.99
- ☐ \$6.00 to \$6.99
- ☐ \$7.00 to \$7.99
- ☐ \$8.00 to \$8.99
- ☐ \$9.00 to \$9.99
- ☐ \$10.00 to \$14.99
- ☐ \$15.00 and over

If you and your household do not use meat in any form, then put a check mark in the blank below.

NONE _____

REMARKS:

Week Beginning _____

EXTRA FORMS FOR YOUR OWN USE

KIND OF MEAT	POUNDS		AMOUNT PAID
Beef	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
TOTAL POUNDS	_____	TOTAL COST	_____
Pork	_____		_____
	_____		_____
	_____		_____
TOTAL POUNDS	_____	TOTAL COST	_____
Poultry	_____		_____
	_____		_____
	_____		_____
TOTAL POUNDS	_____	TOTAL COST	_____
Seafood	_____		_____
	_____		_____
	_____		_____
TOTAL POUNDS	_____	TOTAL COST	_____
Lunch Meats	_____		_____
	_____		_____
	_____		_____
TOTAL POUNDS	_____	TOTAL COST	_____

